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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,995	08/23/2001	Richard E. Smalley	11321-P014US	1538

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EXAMINER

LE, HOA T

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,995

Applicant(s)

SMALLEY ET AL.

Examiner

H. T. Le

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-59 and 61-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-59 and 61-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>June 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

2. Claims 61 and 62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention as set forth in the last office action and further discussed below.

It's still unclear whether or not claim 61 requires at least two polymers wherein each polymer coats different portions on the aggregate. Claim 36, on which claim 61 depends, allow either one or more polymers and does not recite different portions. Thus claim 61 is confusing.

Claim 62 is equally confusing as it's unclear how the same first polymer has different portions, i.e. first and second portion, as recited. Claim 36, on which claim 62 depends, does not clearly set forth an antecedent basis for such portions.

Claim Rejections - 35 USC § 102/103

3. Claims 36-43, 45-59 and 63 are rejected under 35 U.S.C. 102(b) as being anticipated by the Davey patent (EP 0 949 199) as set forth in the last office action and further discussed below.
4. Claims 36 and 44 are rejected under 35 U.S.C. 102(a) as being anticipated by the Grimes article ("The 500 MHz to 5.50 GHz complex permittivity spectra of single-wall

carbon nanotube-loaded polymer composites”) as set forth in the last office action and further discussed below.

5. Claims 44 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Davey patent (EP 0 949 199) as set forth in the last office action and further discussed below.

6. Applicant argued that the Davey patent fails to teach the required claim element of single-walled nanotubes (SWNT); instead the references suggest multiwalled nanotubes (MWNT). This assertion of applicant is not true or correct. At paragraph [0009] of the Davey patent, it is disclosed that the nanotube is formed by sublimation of graphite rods in a plasma. This is a carbon-arc discharge method which yields SWNTs. Note that the Grimes article also discloses that SWNTs used in the article were made from the arc-discharge method (see Grimes, page 460, right column, last three lines). Thus the nanotubes as taught in the Davey reference include SWNTs.

7. Applicant argued that the Grimes article does not teach an aggregate of carbon SWNT coated with a polymer. Note that Grimes teaches bundles of single-wall carbon nanotubes were mixed in monomer and later polymerized. This method is similar to the method disclosed in the instant specification (See Grimes, page 461, left column). Thus, the same products should result. In addition, when SWNTs are mixed with a powder in bundles, it's necessarily inherent that at least some of the central strands of the SWNT bundles would not be covered with the powder (i.e. uncoated), and thus when the powder is polymerized in a liquid hardener, the central strands of the SWNT bundles will necessarily

form uncoated aggregate, and the polymer coats or wraps around the outer sides of the bundles.

8. Applicant's arguments filed December 12, 2005 have been fully considered but they are not persuasive for the reasons set forth above.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1773

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'H. T. Le', with a stylized, cursive flourish extending to the right.

H. T. Le
Primary Examiner
Art Unit 1773